

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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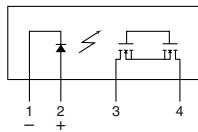
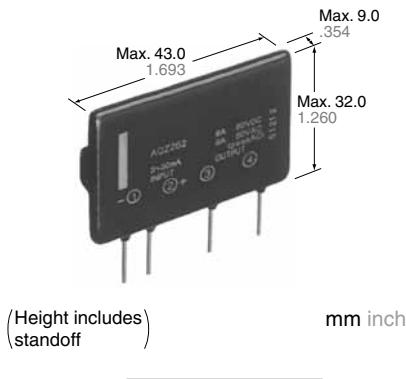
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**High capacity up to 6A
in a slim SIL package**

**PhotoMOS®
Power 1 Form A
High Capacity (AQZ26O)**

FEATURES



RoHS compliant

1. High capacity type power PhotoMOS.

Can switch a wide range of currents and voltages. Can control various types of loads, from very small loads to a max. 6A AC/DC current for sequencers, motors, and lamps.

2. Low on-resistance and high sensitivity.

Low on-resistance of less than typ. 0.036Ω (AQZ262). High sensitivity LED operate current of typ. 1 mA.

3. AC/DC dual use

Bi-directional control is possible. There is no need to differentiate depending on the load as was necessary with the conventional SSR.

4. 4-pin SIL type

(L) 43.0 mm x (W) 9.0 mm x (H) 32.0 mm
(L) 1.693 inch x (W) .354 inch x (H) 1.260 inch.

5. Low-level off state leakage current of max. 10 μA

6. Controls low-level analog signals

The triac, photocoupler, or SSR cannot be used to control signals of less than several hundred mV. The high capacity type power PhotoMOS feature extremely low closed-circuit offset voltage to enable control of low-level analog signals without distortion.

TYPICAL APPLICATIONS

- Mercury relay replacement
- Compact motors, lamps, heaters
- OA equipment

TYPES

	Output rating*		Package	Part No.	Packing quantity	
	Load voltage	Load current			Inner carton	Outer carton
AC/DC dual use	60 V	6.0 A	SIL4-pin	AQZ262	20 pcs	200 pcs
	400 V	1.0 A		AQZ264		

* Indicate the peak AC and DC values.

RATING

1. Absolute maximum ratings (Ambient temperature: 25°C 77°F)

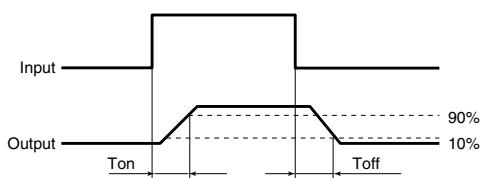
Item		Symbol	AQZ262	AQZ264	Remarks
Input	LED forward current	I _F	50 mA		
	LED reverse voltage	V _R	5 V		
	Peak forward current	I _{FP}	1 A		f = 100Hz, Duty factor = 0.1%
	Power dissipation	P _{in}	75 mA		
Output	Load voltage (peak AC)	V _L	60 V	400 V	
	Continuous load current	I _L	6.0 A	1.0 A	Peak AC, DC
	Peak load current	I _{peak}	10.0 A	3.0 A	100 ms (1shot), V _L = DC
	Power dissipation	P _{out}	3.0 W		
Total power dissipation		P _T	3.0 W		
I/O isolation voltage		V _{iso}	1,500 V AC		
Temperature limits	Operating	T _{opr}	-40°C to +85°C -40°F to 185°F		Non-condensing at low temperatures
	Storage	T _{stg}	-40°C to +100°C -40°F to 212°F		

Power 1 Form A High Capacity (AQZ26○)

2. Electrical characteristics (Ambient temperature: 25°C 77°F)

Item		Symbol	AQZ262	AQZ264	Remarks
Input	LED operate current	I _{Fon}	1.0 mA		I _L = 100 mA V _L = 10 V
	Maximum		3.0 mA		
Input	LED turn off current	I _{Foff}	0.4 mA		I _L = 100 mA V _L = 10 V
	Typical		0.9 mA		
Input	LED dropout voltage	V _F	1.25 V (1.16 V at I _F = 10 mA)		I _F = 50 mA
	Maximum		1.5 V		
Output	On resistance	R _{on}	0.036 Ω	1.0 Ω	I _F = 10 mA I _L = max. Within 1 s on time
	Maximum		0.05 Ω	1.4 Ω	
Output	Off state leakage current	I _{Leak}	10 μA		I _F = 0 mA V _L = max.
Transfer characteristics	Turn on time*	T _{on}	5 ms	4 ms	I _F = 10 mA I _L = 100 mA V _L = 10 V
	Maximum		10 ms		
Transfer characteristics	Turn off time*	T _{off}	0.32 ms	0.14 ms	I _F = 10 mA I _L = 100 mA V _L = 10 V
	Maximum		3.0 ms		
Transfer characteristics	I/O capacitance	C _{iso}	2.0 pF		f = 1 MHz V _B = 0 V
	Maximum		4.0 pF		
Transfer characteristics	Initial I/O isolation resistance	Rs _{iso}	1,000 MΩ		500 V DC
	Maximum operating frequency	Maximum	0.5 cps		I _F = 10 mA Duty factor = 50% I _L = Max., V _L = Max.

*Turn on/off time



RECOMMENDED OPERATING CONDITIONS

Please obey the following conditions to ensure proper device operation and resetting.

Item	Symbol	Recommended value	Unit
Input LED current	I _F	5 to 10	mA

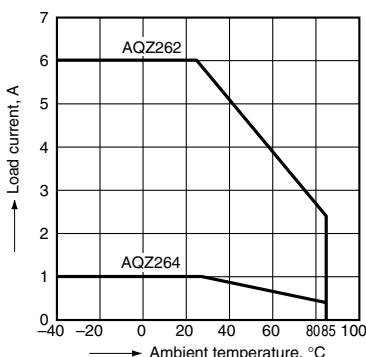
■ These products are not designed for automotive use.

If you are considering to use these products for automotive applications, please contact your local Panasonic Corporation technical representative.

REFERENCE DATA

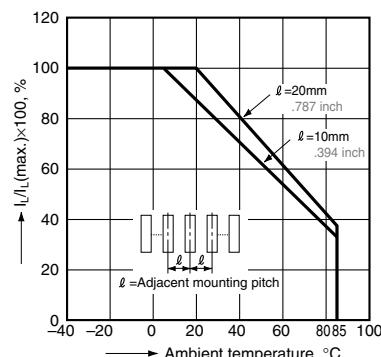
1. Load current vs. ambient temperature characteristics

Allowable ambient temperature: -40°C to +85°C
-40°F to +185°F



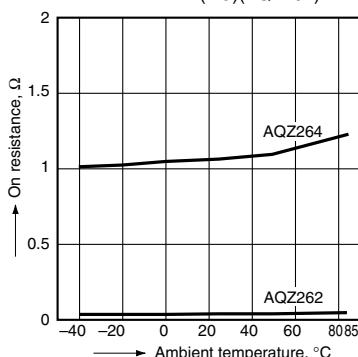
2. Load current vs. ambient temperature characteristics in adjacent mounting

I_L: Load current;
I_L (max.): Maximum continuous load current



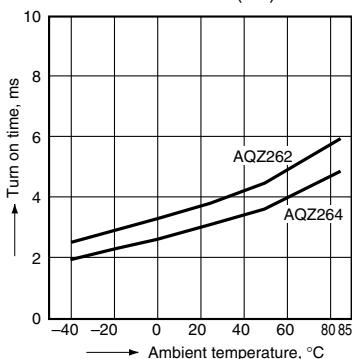
3. On resistance vs. ambient temperature characteristics

LED current: 10 mA;
Continuous load current: 6A (DC)(AQZ262)
1A (DC)(AQZ264)



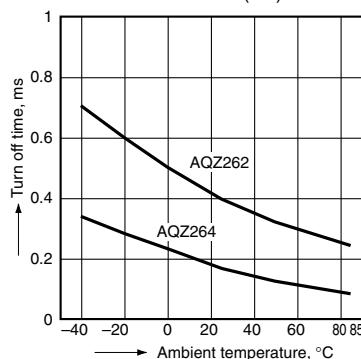
4. Turn on time vs. ambient temperature characteristics

LED current: 10 mA; Load voltage: 10 V (DC); Continuous load current: 100 mA (DC)



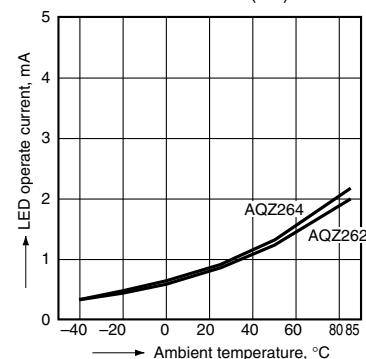
5. Turn off time vs. ambient temperature characteristics

LED current: 10 mA; Load voltage: 10 V (DC); Continuous load current: 100 mA (DC)



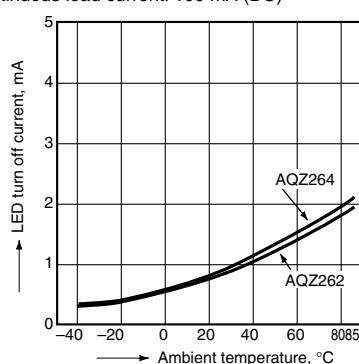
6. LED operate vs. ambient temperature characteristics

Load voltage: 10 V (DC); Continuous load current: 100 mA (DC)



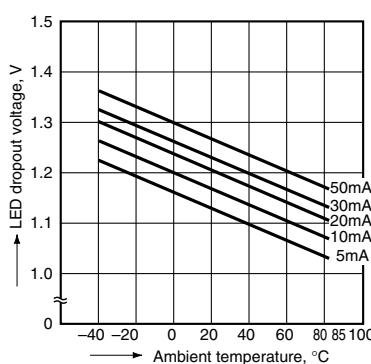
7. LED turn off current vs. ambient temperature characteristics

Load voltage: 10 V (DC); Continuous load current: 100 mA (DC)



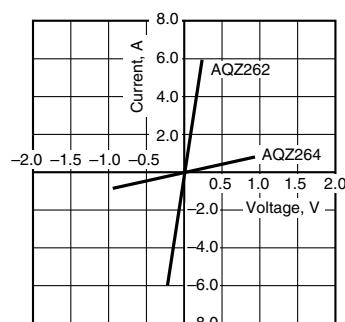
8. LED dropout voltage vs. ambient temperature characteristics

Sample: all types; LED current: 5 to 50 mA



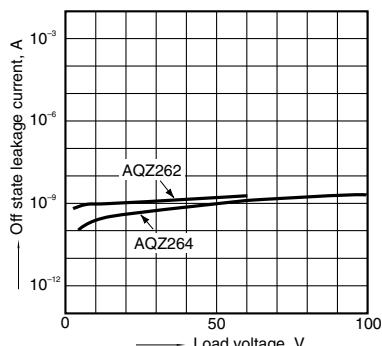
9. Current vs. voltage characteristics of output at MOS portion

Ambient temperature: 25°C 77°F



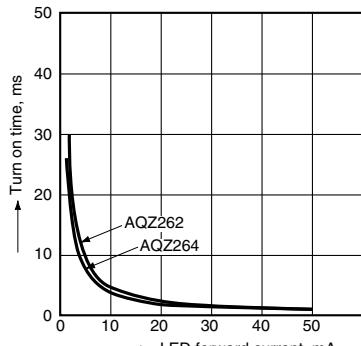
10. Off state leakage current vs. load voltage characteristics

Ambient temperature: 25°C 77°F



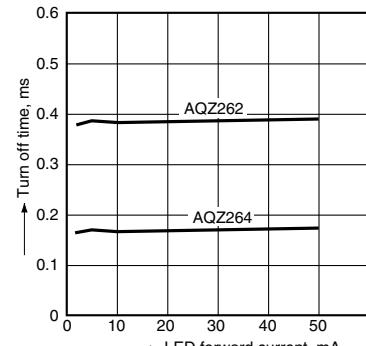
11. Turn on time vs. LED forward current characteristics

Load voltage: 10 V (DC); Continuous load current: 100 mA (DC); Ambient temperature: 25°C 77°F



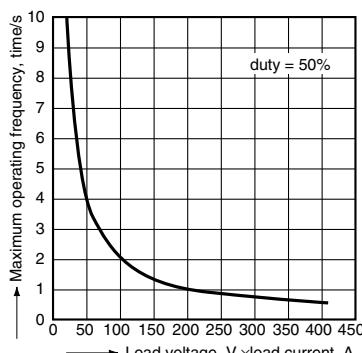
12. Turn off time vs. LED forward current characteristics

Load voltage: 10 V (DC); Continuous load current: 100 mA (DC); Ambient temperature: 25°C 77°F



13. Maximum operating frequency vs. load voltage/current characteristics

LED current: 10 mA; Ambient temperature: 25°C 77°F



14. Output capacitance vs. applied voltage characteristics

Frequency: 10 KHz; Ambient temperature: 25°C 77°F

